

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 1733.1003-010		APPLICATION NO. 10/039,285	
<p>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</p> <p>May 21, 2002</p> <p>(Use several sheets if necessary)</p>		APPLICANT Howard Bernstein, et al.			
		FILING DATE January 3, 2002		GROUP 1615	

U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
JS	AA	4,675,189	06/23/87	Kent, J.S. et al.	424	490	
JS	AB	4,962,091	10/09/90	Eppstein, D.A. et al.	514	2	
	AC	3,523,906	08/11/70	Vrancken, M.N. et al.	252	316	
	AD	3,691,090	09/12/72	Kitajima, M. et al.	252	316	
	AE	3,737,337	06/05/73	Schnoring, H. et al.	117	100	
	AF	3,887,699	06/03/75	Yolles, S.	424	19	
	AG	4,389,330	06/21/83	Tice, T.R. et al.	427	213.36	
	AH	4,530,840	07/23/85	Tice, T.R. et al.	514	179	
	AI	4,542,025	09/17/85	Tice, T.R. et al.	424	78	
JS	AJ	4,835,139	05/30/89	Tice, T.R. et al.	514	15	
JS	AK	4,891,225	01/02/90	Langer, R.S. et al.	424	428	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
JS	AL	WO91/12882	05/09/91	PET WO			
JS	AM	WO96/07399A1	14/03/96	PET WO			
	AN	WO93/07861	29/04/93	PCT WO			
	AO	WO93/25221	23/12/93	PET WO			
JS	AP	WO90/09166	23/08/90	PET WO			
JS	AQ	WO90/13780	15/11/90	PET WO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

JS	AR	Pratt, L., et al., "The Effect of Ionic Electrolytes on Hydrolytic Degradation of Biodegradable Polymers: Mechanical and Thermodynamic Properties and Molecular Modeling," J. Polymer Science 31(7):1759-1769 (1993).
JS	AS	Costantino, H. R., et al., "Solid-Phase Aggregation of Proteins under Pharmaceutically Relevant Conditions," J. of Pharmaceutical Sciences, 83(12):1662-1669 (1994).
JS	AT	Costantino, H. R., et al., "Moisture-Induced Aggregation of Lyophilized Insulin," Pharmaceutical Research, 11(1):21-29 (1994).

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EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
JS	AA2	3,891,570	06/24/75	Fukushima, M. et al.	252	316	
JS	AB2	4,391,797	07/05/83	Folkman, M.J. et al.	424	19	
	AC2	5,176,907	01/05/93	Leong, K.W.	424	78.08	
	AD2	5,122,367	06/16/92	Ron, E. et al.	424	80	
	AE2	5,145,674	09/08/92	Lane, G.A. et al.	424	78.08	
	AF2	4,711,782	12/08/87	Okada, H. et al.	424	455	
	AG2	5,126,147	06/30/92	Silvestri, L.J. et al.	424	497	
	AH2	5,192,741	03/09/93	Orsolini, P. et al.	514	4	
	AI2	4,732,889	03/22/88	Cynshi, O. et al.	514	8	
JS	AJ2	4,879,272	11/07/89	Shimoda, N. et al.	514	8	
JS	AK2	4,992,419	02/12/91	Woog, H. et al.	514	8	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
JS	AL2	WO92/11844	23/7/92	PCT WO			
JS	AM2	WO95/29664 A1	09/11/95	PCT WO			
	AN2	WO94/12158	09/06/94	PCT WO			
	AO2	0633 020 A1	11/01/95	EPO WO			
JS	AP2	WO93/17668	16/09/93	PCT WO			
JS	AQ2	WO94/07469	04/14/94	PCT WO			

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JS	AU	Costantino, H.R., et al., "Aggregation of a Lyophilized Pharmaceutical Protein, Recombinant Human Albumin: Effect of Moisture and Stabilization by Excipients," <i>Biotechnology</i> , 13:493-496 (1995).
JS	AV	Creighton, T.E., "Physical Forces That Determine the Properties of Proteins," In <i>Proteins, Structures and Molecular Principles</i> , (NY: W.H. Freeman and Company), pp. 149-150.
JS	AW	Cunningham, B. C., et al., "Dimerization of Human Growth Hormone by Zinc," <i>Science</i> , 253:545-548 (August 1991).

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EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
JS	AA3	4,853,218	08/01/89	Yim, Z. et al.	424	85.7	
	AB3	4,235,236	11/25/80	Theeuwes, F.	128	260	
	AC3	4,906,474	03/06/90	Langer, R.S. et al.	424	428	
	AD3	5,019,400	5/28/91	Gombotz, W.R. et al.	424	497	
	AE3	4,981,696	1/1/91	Loomis, G.L. et al.	424	486	
	AF3	4,637,905	1/20/87	Gardner, D.L.	264	4.3	
	AG3	4,897,268	1/30/90	Tice, T.R. et al.	424	422	
	AH3	4,767,628	8/30/88	Hutchinson, P.G.	424	426	
	AI3	3,928,566	12/23/75	Briggs, A.R. et al.	424	94	
	AJ3	4,166,800	9/4/79	Pong, J.W.	252	316	
JS	AK3	4,530,901	7/13/85	Weissmann, C.	435	70	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
JS	AL3	0580 428 A1	01/26/94	EPO			
	AM3	0537559 A1	21/04/93	EPO			
	AN3	0266119 A3	04/05/88	EPO			
	AO3	0330180 A1	30/08/89	EPO			
	AP3	WO89/03678	05/05/89	PCT WO			
JS	AQ3	WO90/13285	15/11/90	PCT WO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

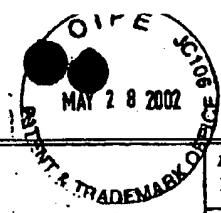
JS	AX	Sato, Toyomi, et al., "Porous Biodegradable Microspheres for Controlled Drug Delivery. I. Assessment of Processing Conditions and Solvent Removal Techniques," <i>Pharmaceutical Research</i> , 5(1):21-29 (1988).
	AY	Langer, R., "New Methods of Drug Delivery," <i>Science</i> , 249:1527-1533 (September 1990).
	AZ	Liu, W. R., et al., "Moisture-Induced Aggregation of Lyophilized Proteins in the Solid State," <i>Biotechnology and Bioengineering</i> , 37:177-184 (1991).
JS	AR2	Lu, W., and Park, T. G., "Protein Release from Poly(lactic-co-glycolic acid) Microspheres: Protein Stability Problems," <i>PDA J. of Pharmaceutical Science & Technology</i> , 49(1):13-19 (Jan-Feb 1995).

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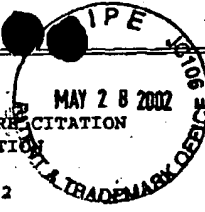
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J S ↓	AA4	4,871,538	10/02/89	Yim, Z. et al.	424	85.7	
	AB4	B1 4,985,404	04/21/92	Mitchell, J.W.	514/6	514/2	
	AC4	4,655,777	04/07/87	Dunn, R.L., et al.	623	16	
	AD4	5,075,115	12/24/91	Brine, C.J.	424	486	
	AE4	5,344,654	09/06/94	Rueger, D.C., et al.	424	423	
	AF4	4,237,114	12/02/80	Cardarelli, N.F.	424	78	
	AG4	4,806,524	02/21/89	Kawaguchi, T., et al.	514	8	
	AH4	4,252,791	02/24/81	Grossberg, S.E., et al.	424	85	
	AI4	5,441,734	08/15/95	Reichert, P., et al.	424	85.7	
	AJ4	5,413,797	05/09/95	Khan, M.A., et al.	424	489	
	AK4						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
J S ↓	AL4	0 595 030 A2	05/09/91	BCT WO			
	AM4	WO93/02712	18/02/93	PCT WO			
	AN4	WO95/11010	27/04/95	PCT WO			
	AO4	WO94/19373 A1	01/09/94	PCT WO			
	AP4	0 307 097 A2	15/03/89	EPO			
	AQ4	WO91/18927 A1	12/12/91	PCT WO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
J	AS2	Cohen, S., et al., "Controlled Delivery Systems for Proteins Based on Poly(Lactic/Glycolic Acid) Microspheres," <i>Pharmaceutical Research</i> , 8(6):713-720 (1991).					
J	AT2	Hora, M.S. et al., "Release of Human Serum Albumin from Poly(lactide-co-glycolide) Microspheres," <i>Pharmaceutical Research</i> , 7(11):1190-1194 (1990).					
J	AU2	Hageman, M.J., et al., "Preformulation Studies Oriented Toward Sustained Delivery of Recombinant Somatotropins," <i>J. Agric. Food Chem.</i> , 40:348-355 (1992).					
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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
88	AL5	0 123 291 A2	31/10/84	EPO			
↑	AM5	0 281 299 A1	07/09/88	EPO			
↓	AN5	0 251 680 A2	07/01/88	EPO			
88	AO5	WO92/19226	12/11/92	PCT WO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
88	AV2	Cleland, J. L., et al., "Characterization of Recombinant Human Growth Hormone-PLGA Formulations in Animals," Proceed. Intern. Symp. Control. Rel. Bioact. Mater., 22:143-144 (1995).					
↑	AW2	Cleland, J. L., et al., "One Month Continuous Release Recombinant Human Growth Hormone-PLGA Formulations," Proceed. Intern. Symp. Control. Rel. Bioact. Mater., 22:149-150 (1995).					
	AX2	Mullerad, J., et al., "Delivery of IL-1 Microspheres to Tumor Macrophages," Proceed. Intern. Symp. Control. Rel. Bioact. Mater., 22:512-513 (1995).					
	AX2	Cleland, J. L., et al., "In Vitro Release of Bioactive Recombinant Human Interferon-γ From PLGA Microspheres," Proceed. Intern. Symp. Control. Rel. Bioact. Mater., 22:518-519 (1995).					
	AR2	Park, T. G., et al., "Importance of In Vitro Experimental Conditions on Protein Release Kinetics, Stability and Polymer Degradation in Protein Encapsulated Poly(D,L-Lactic Acid-Co-Glycolic Acid) Microspheres," J. of Controlled Release, 33:211-222 (1995).					
	AS2	Nagata, S., et al., "Synthesis in E. Coli of a Polypeptide with Human Leukocyte Interferon Activity," Nature, 284:316-320 (March 1980).					
↓	AT2	Rubinstein, M., "The Structure of Human Interferons," Biochimica et Biophysica Acta., 695:5-16 (1982).					
88	AU2	Sah, H., et al., "The Influence of Biodegradable Microcapsule Formulations on the Controlled Release of a Protein," J. of Controlled Release 30:201-211 (1994).					
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